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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/687,552 | 10/15/2003 | Ivan Mollov | VM7034922001 | 7693 |
| 23639 | 7590 | 03/09/2005 | EXAMINER | |
| BINGHAM, MCCUTCHEN LLP THREE EMBARCADERO CENTER 18 FLOOR SAN FRANCISCO, CA 94111-4067 | | | POLYZOS, FAYE S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2878 | |

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/687,552 | Applicant(s) MOLLOV ET AL. | |
| | Examiner Faye Polyzos | Art Unit 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-50 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 10 is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/9/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanigawa et al (US 6,707,876 B2).

Regarding claim 1, Tanigawa discloses a radiation projection detector for generating signals in response to radiation beam (See Generally Fig. 3), the detector comprising a first imager, the first imager having: a conversion layer configuration to generate light photons in response to a radiation (col. 9, lines 52-59); a photo detector array aligned with the conversion panel, the photo detector array comprises a plurality of line of detector elements, each of the detector elements configured to generate a signal in response to the light photon received from the conversion layer (See Generally Figs. 9-13 and col. 12, lines 1-6); and an access circuit coupled to the photo detector array and configured to collect signals from two or more of the lines of detector elements simultaneously (See Generally Fig. 11 and col. 12, lines 48-62).

Regarding claim 2, the first imager further having a signal processing circuit couple to the access circuit and configured to generate image data using the signals received by the access circuit (col. 5, lines 60-67 and col. 6, lines 1-2).

Regarding claims 3-4, Tanigawa discloses the access circuit is configured to collect signals from two or more of the lines of detector elements simultaneously (col. 12, lines 48-52).

Regarding claim 10, Tanigawa discloses the plurality of lines of detector elements comprises a plurality of rows or columns of detector elements (See Generally Fig. 3, col. 14, lines 36-41).

Objection

3. Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding dependent claims 5-9, the prior art does not disclose or fairly suggest a radiation projection detector comprising of a second imager and further configured to collect signals from multiple lines of detector elements of the second imager simultaneously.

The examiner notes that while it is known in the art for a radiation projection detector to comprise data collecting means for converting channel combined signals for each group into projection data for each channel and collecting the projection data along the channel arrangement direction (See for example Tanigawa et al – US 6,707,876 B2 – Fig. 3 and col. 3, lines 66-67 and col. 4, lines 1-2), the prior art does not fairly suggest of multiple imagers or an access circuit to simultaneously collect signals from the multiple imagers.

Allowable Subject Matter

4. Claims 11-50 are allowed.
5. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 11, the prior art does not disclose or fairly suggest a radiation projection detector apparatus for generating signals in response to a radiation beam where the detector comprises an imager having an arrangement where the photoconductor layer is aligned with the detector array to generate charge in response to a radiation and therefore, the detector array generates a signal in response to the charge received from the photoconductor layer.

The examiner notes that while it is known in the art for a radiation projection detector to comprise data collecting means for converting channel combined signals for each group into projection data for each channel and collecting the projection data along the channel arrangement direction (See for example Tanigawa et al – US 6,707,876 B2 – Fig. 3 and col. 3, lines 66-67 and col. 4, lines 1-2), the prior art does not fairly suggest of an arrangement where the photoconductor layer is aligned with the detector array to generate a signal in response to the photoconductor layer.

Regarding independent claim 21, the prior art does not disclose or fairly suggest a radiation projection detector apparatus for generating signals in response to a radiation beam where the detector comprises a plurality of imager and an access circuit configured to collect signals from the first and the second imager simultaneously.

The examiner notes that while it is known in the art for a radiation projection detector to comprise data collecting means for converting channel combined signals for

each group into projection data for each channel and collecting the projection data along the channel arrangement direction (See for example Tanigawa et al – US 6,707,876 B2 – Fig. 3 and col. 3, lines 66-67 and col. 4, lines 1-2), the prior art does not fairly suggest of multiple imagers or an access circuit to simultaneously collect signals from the multiple imagers.

Regarding independent claims 32, 36, and 40, the prior art does not disclose or fairly suggest a method, system or computer readable medium for collecting signals from a detector, the detector having a plurality of image elements, each of which having a transistor gate to send a control signal to select transistor gate for two or more image elements from which signals are to be collected and to simultaneously pass the signals from the image element lines to charge amplifiers coupled to the image elements.

The examiner notes that while it is known in the art for a radiation projection detector to comprise transistors and the number of currents to be distributed can be increased by increasing the number of transistors (See for example Tanigawa et al – US 6,707,876 B2 – col. 10, lines 37-44), the prior art does not fairly suggest of sending a control signal to select transistor gates for two or more image elements to collect signals or to simultaneously pass signals from the two or more image elements to charge amplifiers what which are couple to the image elements as disclosed supra.

Regarding independent claims 41, 49 and 50, the prior art does not disclose or fairly suggest a method, system or computer readable medium for collecting signals from a detector, the detector comprising a plurality of imagers where each imager comprises a plurality of lines of image elements and where the system comprises a

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means collecting signals from the imagers and simultaneously passing the signals on each of the plurality of imagers to charge the amplifier.

The examiner notes that while it is known in the art for a radiation projection detector to comprise a conventional data collecting section comprising a switch unit to combine the channel detected signal currents across the detector rows and a data collecting unit to generate a series of projection data (See for example Tanigawa et al – US 6,707,876 B2 – Fig. 1 (Prior Art) and col. 2, lines 36-42), the prior art does not fairly suggest of a system for collecting signals and simultaneously passing signals of a plurality of imagers.

The remaining claims are allowable based on their dependency.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Polyzos whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FP



DAVID PORTA
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